103D CONGRESS
1ST SESSION

S. 1742

To authorize appropriations to the National Aeronautics and Space Administration for research and development, space flight, control, and data communications, construction of facilities, research and program management, and Inspector General, and for other purposes.

IN THE SENATE OF THE UNITED STATES

NOVEMBER 20 (legislative day, NOVEMBER 2), 1993

Mr. ROCKEFELLER introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

---

A BILL

To authorize appropriations to the National Aeronautics and Space Administration for research and development, space flight, control, and data communications, construction of facilities, research and program management, and Inspector General, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''National Aeronautics and Space Administration Authorization Act, Fiscal Year 1994''.

SEC. 2. FINDINGS.

The Congress finds and declares the following:

(1) The end of the Cold War provides unprecedented opportunities for civilian and defense agencies to coordinate and leverage resources and expertise in pursuing civilian research and development.

(2) The National Aeronautics and Space Administration undertakes research and development of technologies that could contribute to the competitiveness of United States industry.

(3) New international alliances for major science and technology projects such as the Space Station should be forged when domestic economic concerns, as well as foreign policy issues, can be addressed.

(4) The success of the Redesigned Space Station rests in the ability of the National Aeronautics and Space Administration to capitalize on the expertise of the Space Station Freedom program and to work closely with its contractor workforce and international partners.

(5) Appointing a Deputy Administrator and Chief Financial Officer for the National Aeronautics and Space Administration is necessary to implement and manage changes in personnel and programs.

(6) The competitiveness of the United States aeronautics industry may be strengthened by increased Federal investment in selected aeronautics technologies.

(7) The space program undertakes unique health-related research which can be enhanced and leveraged through close collaboration with the National Institutes of Health.

TITLE I—AUTHORIZATION OF APPROPRIATIONS

SEC. 101. FISCAL YEAR 1994 AUTHORIZATION OF APPROPRIATIONS.

(a) RESEARCH AND DEVELOPMENT.—There are authorized to be appropriated to the National Aeronautics and Space Administration to become available October 1, 1993, for ''Research and Development'' for the following programs:

(1) Redesigned Space Station, $1,946,000,000, of which $1,000,000,000 may not be obligated until the National Aeronautics and Space Administration reports to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives on the final configuration, schedule, and costs of the Redesigned Space Station com-

pared with the configuration, schedule, and costs of the Space Station Freedom program.

(2) Technology Investments, $20,000,000, to initiate industry technology investment initiatives, except that no funds appropriated pursuant to this Act may be obligated for the establishment of any Technology Research Institute unless otherwise specifically provided for by law.

(3) Space Transportation Capability Development, $689,200,000, of which $20,000,000 is authorized to develop improvements in existing expendable launch vehicles.

(4) Physics and Astronomy, $1,074,700,000, of which $20,000,000 is authorized for augmenting the funding for Mission Operations and Data Analysis.

(5) Planetary Exploration, $654,300,000, of which—

(A) $65,000,000 is authorized to initiate the Discovery Planetary Program;

(B) $125,400,000 is authorized for Research and Analysis; and

(C) $1,000,000 is authorized for the costs of terminating the High Resolution Microwave Survey Program.

(6) Life and Microgravity Sciences and Applications, $485,000,000, of which—

(A) $20,000,000 is authorized to fund research with the National Institutes of Health; and

(B) $10,000,000 is authorized for a Space Station centrifuge.

(7) Mission to Planet Earth, $1,098,900,000, of which—

(A) $10,000,000 is authorized to initiate the development of the High Resolution Multispectral Stereo Imager for Landsat 7 with the Department of Defense;

(B) $4,000,000 is authorized to initiate a data purchase demonstration program; and

(C) $10,000,000 is authorized for the Consortium for International Earth Science Information network.

(8) Advanced Concepts and Technology, $439,200,000.

(9) Aeronautics Research and Technology, $1,020,700,000, of which—

(A) $197,200,000 is authorized for High Speed Research;

(B) $90,000,000 is authorized for Advanced Subsonic Technology; and

(C) $65,600,000 is authorized for High Performance Computing and Communications.

(10) Transatmospheric Research and Technology, $20,000,000.

(11) Safety, Reliability, and Quality Assurance, $35,300,000.

(12) Academic Programs, $86,000,000, of which $7,000,000 is authorized to initiate competitive remote sensing technology applications projects in coordination with existing remote sensing programs.

(13) Tracking and Data Advanced Systems, $25,000,000.

(b) SPACE FLIGHT, CONTROL, AND DATA COMMUNICATIONS.—There are authorized to be appropriated to the National Aeronautics and Space Administration to become available October 1, 1993, for ''Space Flight, Control, and Data Communication'' for the following programs:

(1) Space Shuttle Production and Operational Capability, $1,050,000,000, of which—

(A) $150,000,000 is authorized for the costs of terminating the Advanced Solid Rocket Motor program; and

(B) $40,000,000 is authorized to initiate development of an aluminum lithium external tank.

(2) Space Shuttle Operations, $2,850,000,000.

(3) Space and Ground Networks, Communications, and Data Systems, $770,000,000.

(4) Launch Services, $300,000,000.

(c) CONSTRUCTION OF FACILITIES.—There are authorized to be appropriated to the National Aeronautics and Space Administration to become available October 1, 1993, for ''Construction of Facilities'', including land acquisition, as follows:

(1) Replacement of Mission Control Center Air Handlers, Johnson Space Center, $8,000,000.

(2) Replacement of Thermal Vacuum Helium Refrigeration System, Johnson Space Center, $7,400,000.

(3) Rehabilitation of Electrical Distribution System, Project Management Building, Johnson Space Center, $2,200,000.

(4) Modification of Launch Complex 39 Exterior Utility Piping, Kennedy Space Center, $1,200,000.

(5) Refurbishment of Launch Complex 39 Cooling System, Kennedy Space Center, $4,000,000.

(6) Refurbishment of Launch Complex 39 Secondary Circuit Breakers, Kennedy Space Center, $3,300,000.

(7) Refurbishment of Vehicle Assembly Building/Pad Water Storage Tanks, Kennedy Space Center, $3,000,000.

(8) Rehabilitation of Industrial Area Fire Alarm Reporting System, Kennedy Space Center, $4,900,000.

(9) Restoration of C–5 Substation, Launch Complex 39 Area, Kennedy Space Center, $5,000,000.

(10) Restoration of Class III Landfill, Kennedy Space Center, $1,900,000.

(11) Restoration of High Pressure Air Compressor System, Marshall Space Flight Center, $8,500,000.

(12) Restoration of Electrical Power System, Marshall Space Flight Center, $2,600,000.

(13) Repair of Decking and Roof, X-Ray and Staging Facility, Michoud Assembly Facility, $1,500,000.

(14) Replacement of Cooling Tower and Boiler, Michoud Assembly Facility, $4,000,000.

(15) Restoration of Space Shuttle Main Engine Test Complex High Pressure Industrial Water System, Stennis Space Center, $2,300,000.

(16) Restoration of High Pressure Gas Storage Capacity, Stennis Space Center, $2,300,000.

(17) Restoration of Underground Communication Distribution System, Stennis Space Center, $3,800,000.

(18) Construction of Earth Systems Science Building, Goddard Space Flight Center, $12,000,000.

(19) Replacement of Central Plant Steam and Electrical Generation Equipment, Goddard Space Flight Center, $8,600,000.

(20) Restoration and Modernization of Chilled Water System, Goddard Space Flight Center, $5,000,000.

(21) Restoration of Airfield, Wallops Flight Facility, $5,200,000.

(22) Replacement of Chillers and Modification of Related Systems, Various Buildings, Jet Propulsion Laboratory, $2,900,000.

(23) Phase I Facility Studies, Requirements Definition, Design, and Modification and Construction of National Aeronautics Facilities, Various Locations, $74,000,000, except that none of these funds may be used to modify, improve, repair, or rehabilitate existing facilities.

(24) Modifications for Composite Technology Center, Lewis Research Center, $27,000,000.

(25) National Transonic Facility Productivity Enhancement, Langley Research Center, $60,000,000.

(26) Performance Improvements in 11-Foot Wind Tunnel, Ames Research Center, $20,000,000.

(27) Rehabilitation of Control Systems, National Full-Scale Aerodynamics Complex, Ames Research Center, $2,100,000.

(28) Upgrade of Outdoor Aerodynamic Research Facility, Ames Research Center, $3,900,000.

(29) Modernization of the Unitary Plan Wind Tunnel Complex, Ames Research Center, $25,000,000.

(30) Construction of EOSDIS Distributed Active Archive Center, Langley Research Center, $8,000,000.

(31) Rehabilitation of Rocket Engine Test Facility, Lewis Research Center, $12,500,000.

(32) Construction of 34-Meter Multifrequency Antenna, Canberra, Australia, Jet Propulsion Laboratory, $17,600,000.

(33) Repair, rehabilitation, and modification of facilities at various locations, not in excess of $1,000,000 per project, $36,000,000.

(34) Minor construction of new facilities and additions to existing facilities at various locations, not in excess of $750,000 per project, $14,000,000.

(35) Facility Planning and Design, $27,000,000.

(36) Environmental Compliance and Restoration, $50,000,000.

Notwithstanding paragraphs (1) through (36), the total amount authorized to be appropriated under this subsection shall not exceed $476,700,000 and not less than $74,000,000 shall be used for the activities described in paragraph (23). No funds are authorized to be appropriated for construction of Space Station Freedom facilities.

(d) RESEARCH AND PROGRAM MANAGEMENT.—There are authorized to be appropriated to the National Aeronautics and Space Administration to become available October 1, 1993, for ''Research and Program Management'' $1,640,000,000.

(e) INSPECTOR GENERAL.—There are authorized to be appropriated to the National Aeronautics and Space Administration to become available October 1, 1993, for ''Inspector General'' $15,500,000.

(f) OVERALL LIMITATION ON REDESIGNED SPACE STATION AND RELATED COSTS.—Notwithstanding subsections (a), (b), (c), and (d), the total amount authorized to be appropriated under this section for the Redesigned Space Station and related Space Station costs, including scientific payloads and launch integration, shall not exceed $2,100,000,000.

SEC. 102. PERMANENT AUTHORIZATION FOR EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH ON SPACE AND AERONAUTICS.

The Administrator of the National Aeronautics and Space Administration (hereinafter referred to as the ''Administrator'') shall ensure that at least $15,000,000 from appropriations under ''Research and Development'' is used annually for the Experimental Program to Stimulate

Competitive Research on Space and Aeronautics as established in title III of the National Aeronautics and Space Authorization Act, Fiscal Year 1993 (Public Law 102–588; 106 Stat. 5119).

SEC. 103. USE OF FUNDS FOR CERTAIN ITEMS AND GRANTS.

(a) AUTHORIZED USES.—Appropriations authorized under sections 101(a) and 101(b) may be used for—

(1) any items of a capital nature (other than acquisition of land) which may be required at locations other than installations of the National Aeronautics and Space Administration for the performance of research and development contracts; and

(2) grants to institutions of higher education, or to nonprofit organizations whose primary purpose is the conduct of scientific research, for purchase or construction of additional research facilities.

(b) VESTING OF TITLE; GRANT CONDITIONS.—Title to facilities described in subsection (a)(2) shall be vested in the United States unless the Administrator determines that the national program of aeronautical and space activities will best be served by vesting title in the grantee institution or organization or that the Federal contribution to such purchase or construction is not substantial enough to warrant vesting title in the United States. Each grant under subsection (a)(2) shall be made under such condi-

tions as the Administrator shall determine to be required to ensure that the United States will receive therefrom benefits adequate to justify the making of that grant.

(c) LIMITATION.—None of the funds appropriated under sections 101(a) and 101(b) may be used in accordance with this section for the construction of any facility, the estimated cost of which, including collateral equipment, exceeds $750,000 unless 30 days have passed after the Administrator has notified the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives of the nature, location, and estimated cost of such facility.

SEC. 104. AVAILABILITY OF APPROPRIATED AMOUNTS.

Appropriations authorized under section 101 (a), (b), and (c) may remain available until expended. Contracts may be entered into with funds appropriated under section 101(d) or (e) for training, investigations, and costs associated with personnel relocation and for other services provided during the fiscal year following the fiscal year for which funds are appropriated.

SEC. 105. LIMITED USE OF FUNDS.

(a) USE FOR SCIENTIFIC CONSULTATIONS OR EXTRAORDINARY EXPENSES.—Appropriations authorized under section 101(a) may be used, but not to exceed

$35,000 per fiscal year, for scientific consultations or extraordinary expenses upon the authority of the Administrator, and the Administrator's determination shall be final and conclusive upon the accounting officers of the Government.

(b) USE FOR FACILITIES.—(1) Except as provided in paragraph (3), appropriations authorized under sections 101(a) and 101(b) may be used for the construction of new facilities and additions to, repair of, rehabilitation of, or modification of existing facilities, except that the cost of each such project, including collateral equipment, shall not exceed $200,000 per fiscal year.

(2) Appropriations authorized under sections 101(a) and 101(b) may be used for unforeseen programmatic facility project needs, other than those described in paragraph (1), except that the cost of each such project, including collateral equipment, shall not exceed $750,000 per fiscal year.

(3) Appropriations authorized under section 101(a) may be used for repair, rehabilitation, or modification of facilities controlled by the General Services Administration, except that the cost of each such project, including collateral equipment, shall not exceed $500,000 per fiscal year.

(4) Notwithstanding any other provision of this section, authority to reprogram appropriations authorized under sections 101(a) and 101(b) does not apply to appropriations authorized under sections 101(a)(1) and 101(a)(9).

SEC. 106. REPROGRAMMING FOR CONSTRUCTION OF FACILITIES.

Appropriations authorized under section 101(c)—

(1) in the discretion of the Administrator may be varied upward by 10 percent; or

(2) after the expiration of 30 days of following a report by the Administrator to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives on the circumstances of such action, may be varied upward by 24 percent, to meet unusual cost variations.

The total amount authorized to be appropriated under section 101(c) shall not be increased as a result of actions authorized under paragraphs (1) and (2) of this section.

SEC. 107. CONSIDERATION BY COMMITTEES.

Notwithstanding any other provision of this Act—

(1) no amount appropriated pursuant to this Act may be used for any program deleted by the Congress from requests as originally made by the

President for the National Aeronautics and Space Administration to either the Committee on Commerce, Science, and Transportation of the Senate or the Committee on Science, Space, and Technology of the House of Representatives;

(2) no amount appropriated pursuant to this Act may be used for any program in excess of the amount actually authorized for the particular program by section 101(a), 101(b), or 101(d); and

(3) no amount appropriated pursuant to the Act may be used for any program which has not been presented to either such committee,

unless a period of 30 days has passed after the receipt, by each such committee, of notice given by the Administrator containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such proposed action. The National Aeronautics and Space Administration shall keep the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives fully and currently informed with respect to all activities and responsibilities within the jurisdiction of those committees. Any Federal department, agency, or independent establishment

shall furnish any information requested by either committee relating to any such activity or responsibility.

SEC. 108. LIMITATION ON OBLIGATION OF UNAUTHORIZED APPROPRIATIONS.

Not later than 30 days after the later of the date of enactment of an Act making appropriations to the National Aeronautics and Space Administration for fiscal year 1994 or the date of enactment of the Act, the Administrator shall submit a report of Congress and to the Comptroller General which specifies—

(1) the portion of such appropriations which are for programs, projects, or activities not specifically authorized under this Act, or which are in excess of amounts authorized for the relevant program, project, or activity under this Act; and

(2) the portion of such appropriations which are specifically authorized under this Act.

SEC. 109. SPECIAL REPROGRAMMING FOR SPACE CO-OPERATION WITH RUSSIA.

The Administrator may reprogram up to $100,000,000 of the amount authorized for ''Research and Development'' and ''Space Flight, Control, and Data Communications'' (except for funds authorized under sections 101(a)(1) and 101(a)(9)) for purposes of cooperating with Russia in space. No funds so reprogrammed may

be obligated until a period of 30 days has passed after the Administrator has notified the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives of such reprogramming.

TITLE II—MISCELLANEOUS PROVISIONS

SEC. 201. USE OF NASA LIFE SCIENCES FACILITIES.

The Administrator shall issue regulations to provide use of life sciences facilities by extramural investigators pursuant to title VI of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (42 U.S.C. 2487 et seq.) and enter into reciprocal agreements with the National Institutes of Health to provide access to the ground-based research facilities of the National Aeronautics and Space Administration in life sciences.

SEC. 202. ORBITAL RESEARCH PLAN.

The Administrator shall, at the time of submission of the President's fiscal year 1995 budget, transmit to the Congress a detailed Orbital Research Plan that establishes the science research priorities for the next 5 years for life sciences, materials research, and biotechnology research. The plan shall include budgets, with the associated support costs, for the Spacelab, Spacehab, Comet, Mir, and Redesigned Space Station programs.

SEC. 203. INDEPENDENT INVESTIGATIONS FOLLOW-UP.

The Administrator shall report annually, to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives at the time of the submission of the President's budget request, on—

(1) all actions taken by the National Aeronautics and Space Administration to remedy problems and adopt recommendations identified by each panel convened to investigate vehicle or systems failures and losses; and

(2) where such recommendations have not been adopted, the reasons for not pursuing such recommendations.

SEC. 204. REQUIREMENT FOR INDEPENDENT COST ANALYSIS.

The Chief Financial Officer for the National Aeronautics and Space Administration shall be responsible for conducting independent cost analyses of all new projects estimated to cost $200,000,000 or more, including the life cycle costs of research and development, space transportation, construction of facilities, and research and program management, and shall report the results and update the results annually to Congress at the time of the submission of the President's budget request.

SEC. 205. FACILITIES REVIEW.

(a) REVIEW.—The Administrator shall conduct a review of the costs of maintaining all facilities owned by the National Aeronautics and Space Administration. The review shall address—

(1) the function of each facility and its contribution to National Aeronautics and Space Administration missions;

(2) the current estimated value of each facility and associated land, including details on assets and liabilities; and

(3) operating costs of each facility.

(b) REPORT.—The Administrator shall report on the results of the facilities review required by subsection (a), to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives at the time the President submits the fiscal year 1995 budget to Congress.

SEC. 206. COMMERCIAL SPACE LAUNCH TRANSPORTATION.

(a) AMENDMENT.—Section 24 of the Commercial Space Launch Act (49 App. U.S.C. 2623) is amended by inserting ''and for fiscal year 1994 $4,467,000'' after ''$4,900,000''.''

(b) REGULATIONS.—The Secretary of Transportation shall issue regulations on insurance and liability under the

Commercial Space Launch Act (49 App. U.S.C. 2601 et seq.) that include—

(1) guidelines for industry to obtain sufficient insurance coverage for potential damages to third parties;

(2) procedures for requesting and obtaining licenses to operate a commercial launch vehicle and reentry vehicle;

(3) procedures for requesting and obtaining operators licenses for launch and reentry; and

(4) procedures for the application of government indemnification.

SEC. 207. OFFICE OF AERONAUTICS AND SPACE COMMERCE AUTHORIZATION.

There are authorized to be appropriated to the Secretary of Commerce for the Office of Aeronautics and Space Commerce $538,000 for the coordination and development of all policy recommendations and activities pertaining to commercial aeronautics and space except those functions and activities explicitly assigned by statute to other Federal agencies.

○